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OCT 1 6 2002

OFFICE OF WASTE & CHEM. MGMT.

October 15, 2002

Assistant Chief Jeff Jensen Tacoma Fire Dept. 901 Fawcett Avenue Tacoma, WA 98402

Community Right-to-Know Unit Department of Ecology P.O. Box 47659 Olympia, WA 98504-7659

Re: Follow-up Notice Regarding Report of Potential Release to the Air

To whom it may concern:

This letter is a follow-up notice regarding the potential release to the air from Reichhold, Inc.'s facility, located at 3320 Lincoln Avenue, Tacoma, Washington, which Reichhold reported by telephone to the National Response Center, the U.S. Environmental Protection Agency (EPA), and the City of Tacoma Fire Department on October 9, 2002. A representative from the Washington State Department of Ecology (Ecology) was at Reichhold's property when these notifications were made and personally observed the notifications to these three parties.

As indicated in Reichhold's telephone notifications, Reichhold reported a potential release to the air of chlorinated phenols based on its understanding that there had been odor complaints in the Tacoma area. Reichhold made the notifications and submits this follow-up notice as a protective measure. Reichhold continues to believe that it is not the source of the odor in the Tacoma area, and continues to believe that notification obligations under the Comprehensive Environmental Response Compensation and Liability Act, the Emergency Planning and Community Right-to-Know Act, or any other authorities have not been triggered.

Background

Reichhold formerly operated a pentachlorophenol manufacturing facility at the Tacoma site. In accordance with a Resource Conservation and Recovery Act (RCRA) permit issued by the EPA in 1988, and currently administered by both the EPA and Ecology, Reichhold is conducting corrective action activities at the site for both soil and groundwater. Since the facility began decommissioning in 1985, numerous soil and groundwater investigations have been completed to assist Reichhold in characterizing the site and defining corrective actions. Under the RCRA permit, and with significant Ecology and EPA oversight, Reichhold's contractors have been completing the second phase of planned soil excavations at the site since mid August, 2002. The most recent soil samples (taken on October 3, 2002) from the former pentachlorophenol plant area were analyzed by an off-site laboratory and reported by the laboratory to contain 2 chlorophenol, 2,4 dichlorophenol, 2,4,6 trichlorophenol, 2,3,5,6 tetrachlorophenol and pentachlorophenol.





On Sunday, October 6, 2002, Reichhold learned that there had been odor complaints in the Tacoma area. Based on its own preliminary internal investigation and on conversations with various federal, state and local regulatory agencies that have been investigating the odor complaints over the last several days, Reichhold determined that its excavation activities were not the likely source of the odor. Reichhold nevertheless decided to provide telephone notice as a protective measure to the National Response Center, the EPA on-scene coordinator (who already had been to the site on Monday, October 7, and Tuesday, October 8, as part of the effort to determine the source of the odor), and the Tacoma Fire Department (who also had been to the site on Monday, October 7). Stan Leja, Reichhold's RCRA permit manager from Ecology, was at the Reichhold site at the time the telephone notifications were made, and observed each of the notifications. In addition, a member of Ecology's Spill Response Team and Stan Leja had also visited Reichhold's site on Monday, October 7. The National Response Center assigned number 625-436 to Reichhold's report.

Chemical Name of Substances Involved in Potential Release

Based on the soil sampling results described above, the substances involved in the potential air release are: 2 chlorophenol, 2,4 dichlorophenol, 2,4,6 trichlorophenol, 2,3,5,6 tetrachlorophenol and pentachlorophenol.

Whether the Substances Are Extremely Hazardous Substances

None of these substances is on the list of extremely hazardous substances at 40 C.F.R. Part 355.

Estimate of the Quantity of Any Such Substance that was Potentially Released into the Environment

Since Reichhold has made this notification and report as a protective measure, Reichhold does not know or have an estimate of the quantity potentially released into the air. Air sampling conducted by EPA's spill response team on October 7, 2002, apparently did not detect any of the substances reported in the soil sample using their close support laboratory gas chromatograph/mass spectrometer (GC/MS) they had brought onsite. On October 10 and 11, 2002, EPA conducted additional air sampling at the site for semi-volatile compounds and particulate matter. It is Reichhold's understanding that those air samples have been submitted by EPA to a laboratory for analysis. It is unknown when, or if, those results may be available to Reichhold. If those results indicate the presence of these compounds in the air, Reichhold could potentially use this information for air modeling to estimate how much, if any of these substances, may have been released. However, at this time, Reichhold does not have an estimate of the quantities of hazardous substances released, if any.

Time and Duration of Potential Release

Reichhold does not know the time and duration of the release, if any. The excavation activities at the former pentachlorophenol plant area were conducted on Thursday, October 3, from approximately 1:30 PM until 3:00 PM and again on Friday, October 4, from approximately 7:30 AM until 2:30 PM. The excavation remained open at the request of EPA on-scene coordinator until Thursday, October 10, at which time it was backfilled with clean offsite material.

The Medium into Which the Potential Release Occurred

If a release occurred, it was into the air.

Any Known or Anticipated Acute or Chronic Health Risks Associated With the Potential Release and, Where Appropriate, Advice Regarding Medical Attention Necessary for Exposed Individuals

Three health and safety plans have been prepared for the site. One is Reichhold's Tacoma facility operational health and safety plan, the second is the health and safety plan prepared by Reichhold's consultant specifically for the collection of environmental samples during the corrective action and excavation activities, and the third is the contractor's health and safety plan for the excavation activities. None of these plans indicates any acute or chronic health risks associated with the excavation of any of these compounds.

Proper Precautions to Take as a Result of the Potential Release

Reichhold stopped their planned excavation activities at the end of the work day on Friday, October 4, 2002, at approximately 2:30 PM. This was before it had learned that there had been any odor complaints. On Monday, October 7, 2002, Reichhold covered the excavated soil with soils from another area of the site. On Thursday, October 10, 2002, Reichhold began backfilling the excavation with clean offsite material. The backfilling was completed on Friday, October 11, 2002. Evacuation is not necessary.

Additional Actions to Respond to and Contain the Potential Release

As described above, EPA's spill response personnel are continuing to visit the site to conduct tests to determine if Reichhold may have been the source of the odor complaints. Reichhold continues to cooperate fully in that investigation. In addition, until the matter is resolved, Reichhold has filled the excavation with clean offsite material.

Although Reichhold continues to believe that its activities were not the source of the odor, Reichhold is committed to working with all involved agencies to assist in their investigation of this matter. Reichhold looks forward to resolving this matter quickly so that it may complete its corrective action activities at the site. If you have any questions or require further information, please do not hesitate to call me at (253) 627-0406.

Very truly yours,

Alan S. Jeroue

Reichhold, Inc. Tacoma Site Manager

cc: Stan Leja/Ecology

Man L Jeroue

Robbie Hedeen/EPA Region 10 Dan Uyesato/Reichhold, Inc. John Oldham/Reichhold, Inc. Carolyn Kossik/CH2M HILL Carl Kitz/EPA OSC/Region 10



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Environmental Cleanup Office

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WA



Hydrogen Release Compound (HRC®) Case History # H - 2.2

PCP Remediation Field Demonstration in Tacoma, Washington

SITE CHARACTERISTICS

> Contaminants: Pentachlorophenol

> Soil Type: Fine to medium grain sand and silty loam

> Treatment: HRC Injection - Barriers

SUMMARY

The Reichhold Chemicals, Inc. Tacoma WA facility is a 54-acre site located in the Tacoma Tideflats, a heavily industrialized area adjacent to Commencement Bay. The facility was a former manufacturing plant producing pentachlorophenol (PCP) from 1956 to 1986. The plant continued to manufacture treated fiber products (TFP) until 1990. Compounds detected were semivolatile and volatile organic compounds, Aroclar 1248, molybdenum, and lead. High concentrations of chlorinated phenols such as PCP, 2,4,6-trichlorophenol (TCP) and 2,4-dichlorophenol (DCP) were detected in groundwater.

The highest concentrations of chlorinated phenols were found in the shallow aquifer. In 1990, Reichhold installed a shallow interception drainage (SID) to contain shallow aquifer groundwater. An intermediate groundwater extraction well and an onsite water treatment facility were also installed to treat the water from the extraction well and the SID system.

There are three near-surface aquifers on site and two near-surface confining layers, or aquitards. The uppermost aquifer is composed of 400 ft of fine-grained marine deposits. The groundwater flow patterns in the intermediate aquifer in the southeastern portion of the site and in the offsite area are dominated by the influence of the groundwater extraction system. Extraction wells EW-3 and EW-5 induce a northward groundwater gradient.

HRC was injected in a barrier across the intermediate-aquifer PCP plume. HRC injection points were spaced on 20-foot centers and extended 300 feet across the width of the plume. Initial PCP concentrations ranged from 220 ug/L to 5,300 ug/L. The HRC pilot study was registered through the Underground Injection Control (UIC) program under the Water Quality program Department of Ecology in the State of Washington. Injection zone was 5-foot intervals around HRC-01 consisting of 43 injection points using approximately 90 lbs. HRC each point, along a line 10 feet south of HRC-01 using a direct-push rig. A total of eight sampling events were conducted (one baseline event

and seven post application events) to assess the effect of HRC in the intermediate aquifer.

RESULTS

The pilot test results indicated the PCP concentration decreased substantially in both monitoring wells. In the downgradient well the baseline PCP concentration was 1556 ug/L and by day 157 was 76 ug/L, a 95% reduction. After 160 days the test area ground water direction and velocity changed dramatically several times due to a loss of hydraulic control when the site wide groundwater containment / extraction system suffered a series of pump failures.

The HRC released lactic acid and increased the concentration of hydrogen downgradient of HRC injection points. Hydrogen concentrations in groundwater at Baseline in the downgradient well were 3.84 nanomolar (nM) and at day 33 rose to 184 nM. Hydrogen concentrations were consistently higher than baseline throughout the monitoring period. Metabolic acids in HRC-01 are non detected at baseline but at day 33 acetic acid appears at a 32 mg/L concentration. Lactic and Propionic acids are also high. Within the next two sampling rounds, all the metabolic acids were back down to non-detected levels. Hydrogen concentration in the upgradient well at baseline was 0.94 nM and within the next three sampling rounds rose to 8.7 nM, a definite increase in hydrogen. The metabolic acids in this well remained at non-detected levels throughout the monitoring. The HRC pilot test indicated that injection of HRC electron donor material is a viable option in the long-term management of PCP in groundwater at the Reichold Tacoma facility.